WO 2005/054581 PCT/NO2004/000366

6

Claims

1. Method for production of masts mainly based on extruded bodies and formed with a general cross section area which comprising at least three mast elements (1,2) joined in the corner (3) by means interacting rail sections (5) and channel sections (4),

characterized in that

5

10

15

20

25

30

35

the channel section (4) is provided with inwardly tapered inner wall sections (4A,4B),

the rail section (5) of one mast element (1,2) is inserted into the channel section (4) on an adjacent mast element (1,2); and

the joint is obtained by a substantially continuous motion of a roller type tool (11,12) in longitudinal direction of and on the exterior of the channel section (4), the rollers providing sufficient force to clamp the channel section (4) and the rail section (5) together, causing permanent deformation of the channel section (4) around the rail section (5), forming the corner (3).

- 2. Method according to claim 1, wherein the part of the rail section (5) intended to be in engagement with the channel section (4) on an adjacent mast element (1,2) is provided with teeth, ridges or rifles 6 or similar at least along parts of the length of the mast elements (1,2), said teeth, ridges or rifles 6 or similar being at least partly deformed in order to obtain a secure joint between the channel section (4) and the rail section (5) when the roller like tool clamps said two parts (4,5).
- 3. Method according to claim 1 or 2, wherein at least one of the inner walls of the channel section (5) is provided with teeth, ridges or rifles 6 or similar, said teeth, ridges or rifles 6 or similar being at least partly

WO 2005/054581 PCT/NO2004/000366

7

deformed to a secure joint when the roller like tool forces the walls of the channel section (4) into gripping contact with the rail section (5).

- 5 4. Method according to one of the claims 1-3, wherein one inner wall (4B) of the channel sections (4) is tapered with respect to the other inner wall (4A) in order to simplify insertion of the rail section (5) into the channel section (4), whereupon the tapered wall (4B) on the channel section (4) are forced against the rail section (5) by means of the roller like tool.
- 5. Method according to on of the claims 1-4, wherein the transition between the at least one tapered wall (4B) of the channel section (4) along its inner surface on the lower part of the wall is provided with an inner recess in order to secure a proper joint between the channel section (4) and the rail section (5).
- 20 6. Method according to one of the claim 1-5, wherein rollers (11,12) on the roller tool are provided with knobs (10) or similar in order to form spot strengthened areas.
- 7. Method according to on of the claims 1-6, wherein the element (1,2) comprises a plurality of interconnected tubular profiles (8) and interconnected with intermediate plates (9), the tubular profiles (8) during the extrusion process or subsequent to the extrusion process being provided with intermittent slits on one or both side of the tubular profile (8), whereupon the element (1,2) are
- 30 the tubular profile (8), whereupon the element (1,2) are stretched in lateral direction with respect to the longitudinal direction of the elements (1,2) thereby forming a lattice element.